

Appl. No. 10/648,429
Amdt. Dated May 23, 2006
Reply to Office Action of February 23, 2006

Attorney Docket No. 81872.0050
Customer No. 26021

REMARKS/ARGUMENTS:

Claims 5-7, 11-14, and 16-20 are canceled without prejudice. Claims 1, 8, 15, 21, 25, 28, and 29 are amended. New claim 32 is added. Claims 1-4, 8-10, 15, and 21-32 are pending in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

The present invention relates to a method and apparatus for processing a substrate and a plate used therein, and more particularly to a method and apparatus for processing a substrate that enable surface roughening on a silicon substrate used in a solar cell or the like, and a plate used therein. (Applicant's specification, at p. 1, lines 9-13).

CLAIM OBJECTIONS:

Claim 28 stands objected to because it is dependent upon claim 29. In response, the Applicant switched the order of the claims so that claim 29 now depends from claim 28. Withdrawal of this objection is thus respectfully requested.

CLAIM REJECTIONS UNDER 35 U.S.C § 102:

Claims 1, 3, 4, 21, 23-25, and 27-29 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Moslehi (U.S. Patent No. 6,132,805). The Applicant respectfully traverses this rejection.

Independent claims 1, 21, and 25, as amended, require that the plate is provided with a number of opening portions in a peripheral region. Therefore, the plate of the present invention has opening portions in both the central and peripheral regions. The open area ratios are different from each other.

The Office states that Figure 5 of Moslehi depicts an apertured shutter wherein the ratio of open spaces is lowest around the periphery.

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The Applicant respectfully disagrees. The shutter of Moslehi's Figure 5 opens and closes with rotation of the plates 116. If the plates 116 are closed as shown in Figure 5, gas passes through a number of holes 112 at an incident angle limited to α . It is understood that plasma etching is done at an angle α of the line-of-sight transmission in a state where the plates 116 are closed as shown in Figure 5 (Moslehi, column 7, lines 27-36).

In this etching condition, the ratio of the open space is not believed to be lowest around the periphery; because triangle portions exist between the shutter plate 116 and the actuator ring 68. The twelve triangle portions exist as shown in Figure 5, and they are considered to be openings for the gas to pass through. Therefore, in the shutter of Figure 5 of Moslehi, the open area ratio on the periphery region is not lower than that of the central region, but instead it is higher on the periphery region.

In response to the First Office Action, the Applicant traversed in the amendment dated November 29, 2005, that "When the shutter is opened, it is in shape of Fig. 2 an outer portion of the shutter forms a region covered by the alternating plate 116 which does not pass the process gas." However, it is the Applicant's understanding that this is a case when the shutter is opened onto the substrate to permit a full range of the line-of-sight transmissions from the target onto the substrate (Moslehi, column 7, lines 25-27). In this case, a single opening seems to exist on a central portion of the shutter plate, which is a different configuration from the present invention that comprises a number of opening portions provided on the plate.

In light of the foregoing, Applicant respectfully submits that Moslehi cannot anticipate or render obvious claims 1, 21, and 25, because Moslehi fails to teach or suggest each and every claim limitation. Claims 3, 4, 23, 24, and 27-29 depend from either claim 1, 21, or 25; and are therefore, patentable over Moslehi for at least the

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reasons discussed above. Withdrawal of these rejections is thus respectfully requested.

CLAIM REJECTIONS UNDER 35 U.S.C § 103:

Claims 2, 22, and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Moslehi (U.S. Patent No. 6,132,805). The Applicant respectfully traverses this rejection.

Claims 2, 22, and 26 depend from claims 1, 21, and 25, respectively; and are therefore, patentable over Moslehi for the reasons discussed above.

ALLOWABLE SUBJECT MATTER:

Claims 8-10, 15, 30, and 31 are allowed.

New claim 32 is directed to a relative configuration between the plate and the substrate of the invention. Claim 32 depends from claim 1 and is therefore, patentable over Moslehi for at least the same reasons discussed above.

Applicant believes the foregoing amendments comply with requirements of form and thus may be admitted under 37 C.F.R. § 1.116(b). Alternatively, if these amendments are deemed to touch the merits, admission is requested under 37 C.F.R. § 1.116(c). In this connection, these amendments were not earlier presented because they are in response to the matters pointed out for the first time in the Final Office Action.

Lastly, admission is requested under 37 C.F.R. § 1.116(b) as presenting rejected claims in better form for consideration on appeal.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

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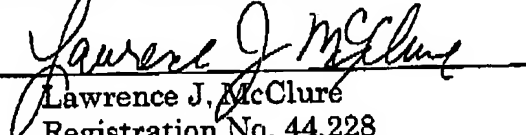
If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6700 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,
HOGAN & HARTSON L.L.P.

Date: May 23, 2006

By:


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